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More Pesticides on Kids' Food? EPA Wants to Greenlight Chemical Linked to Reproduction, Developmental Issues

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By The New Lede

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By Grace Van Deelen

Federal regulators are poised to allow U.S. farmers to start applying a pesticide currently restricted to non-food uses on fields producing an array of food crops in a move that scientists and advocates say could threaten human and ecological health.

Last week, the U.S. Environmental Protection Agency (EPA) announced a proposed decision to allow the first-ever uses of chlormequat chloride on wheat, barley, oats and a hybrid of rye and wheat known as triticale.

The agency said the move is aimed at helping farmers limit the bending and breaking of small grains, a condition called lodging, which can impair harvesting and reduce yields.

The pesticide acts as a plant growth regulator, controlling plant size by blocking hormones that stimulate growth prior to bloom.

Chlormequat is not currently approved for use on food or animal feed in the U.S., though it has been allowed for use on ornamental crops grown in nurseries and greenhouses since 1962.

Farm groups welcomed the EPA action; the pesticide is already used by farmers in other countries on small grain products that are imported to the U.S.

But critics say laboratory research has linked the chemical to problems with reproduction and development, and the EPA should not be putting people and animals at greater risk of exposure.

The crops included in the proposed decision can make up a significant portion of a child's diet, a fact that makes the EPA's proposal potentially dangerous for children, according to Dr. Phil Landrigan, a professor of public health and epidemiologist at Boston College.

"There appears to be evidence for developmental and reproductive toxicity," Landrigan said of chlormequat research.

Landrigan continued:

> "Some little kids will spend a year of their life eating mostly a Cheerio diet. That's what kids do. And in the end, the children who happen to be eating that atypical diet are the ones who are really heavily exposed."

The EPA has "a legal duty to protect infants and children against the toxic effects of pesticides," Landrigan said. "And they appear not to have taken that responsibility seriously."

An 'astronomical' increase

The EPA's proposed action would greatly increase the amount of chlormequat used in the U.S., as well as the amount of chlormequat residue in food, according to the Center for Food Safety (CFS), a public health advocacy group.

In a comment to the EPA about the proposed action, CFS said the rule would lead to an "astronomical rise in domestic use of [chlormequat]," estimating that use of the pesticide would increase 28,000-fold.

In its comments, CFS warned that approving new uses and higher tolerances could encourage growers to apply chlormequat at higher doses and across a longer period of the growing season than is necessary, which would further increase the ecological and human health impacts of the pesticide.

The maximum residue levels of the pesticide currently allowed on imported wheat, barley and oat are 3 parts per million (ppm), 2 ppm and 10 ppm, respectively.

The EPA issued those rules in response to a request from Taminco US LLC, a subsidiary of Eastman Chemical Company that manufactures pesticides containing chlormequat.

The EPA's newest proposed decision comes after a 2021 petition from Taminco asking the EPA to establish a new residue tolerance of 8 ppm for barley.

Last month, Taminco updated the request to establish new tolerances for oats at 40 ppm, wheat and triticale grain at 5 parts per million.

A January investigation by the Environmental Working Group (EWG) research and advocacy group, found chlormequat residues at levels higher than the EWG health guideline of .03 parts per million in 11 of 14 oat-based food products in the U.S., despite the fact that the chemical is currently only allowed for use on imported grain.

According to EWG, its health guidelines are much lower than EPA's maximum residue levels due to the danger chlormequat poses to children's health, the variation of sensitivity between people and the uncertainty of the data on chlormequat's health effects.

Taminco did not respond to a request for comment about the proposed decision.

Animal studies raise concerns

Humans can be exposed to chlormequat in various ways, including using the chemical, ingesting foods with chlormequat residues or drinking groundwater contaminated with the pesticide.

While there are no studies of the chemical's effects on human health directly, studies have shown that chlormequat is toxic to mammals.

Notably, in one peer-reviewed study, the offspring of rats exposed to the chemical had problems with growth and development.

The chemical has also been shown to negatively impact bone development in rats and fertility in mice.

A 1989 Danish study found that swine fed with chlormequat-treated wheat showed reproductive health problems at doses lower than what is currently considered safe for humans.

The chemical is "pretty clearly an endocrine disruptor," said Bill Freese, CFS science director.

The EPA's human health risk assessment for the proposed changes found decreases in body weight and neurotoxic effects in studies using rats, mice and dogs.

However, since neurotoxic effects were mostly found to be associated with high doses of chlormequat, the agency waived two additional studies: one to determine the neurotoxicity of the chemical at low doses and another to determine the toxicity of the chemical to animals' immune systems.

Waiving those two studies was an improper action by the EPA, according to Freese.

"The point of doing the developmental neurotoxic is precisely that the effects can occur at much lower exposure levels," he said. "You need to do this kind of study."

The EPA did not respond to a request for comment. The agency has stated in regulatory filings, however, that it has determined that the proposed decision poses no "risks of concern" to human health.

Ecological concerns

In the announcement, the EPA said they had not identified any "risks of concern" to ecological health from the proposed decision, though, in its assessment of ecological risks, it did find the chemical to be slightly toxic to birds and moderately toxic to mammals.

Critics say the wild bees and other invertebrates may be harmed by the use of chlormequat and the agency's risk assessment illegally fails to evaluate risks to threatened and endangered species.

The EPA's pesticide approval process has been criticized previously by environmental advocates for failing to evaluate risks to threatened and endangered species.

Last year, the U.S. Court of Appeals for the District of Columbia Circuit ordered the agency to address the harms to threatened and endangered species from four pesticides after a lawsuit from CFS and other advocates.

"For decades the EPA has practiced a reckless spray-first-look-later approach to addressing the threats of pesticides to imperiled species," Jonathan Evans, senior attorney for the Center for Biological Diversity, said in a statement.

The EPA also did not respond to a request for comment about the threats of chlormequat to threatened and endangered species.

Despite the concerns, farmers are eager for new uses of the pesticide. The National Association of Wheat Growers and the National Barley Growers Association sent public comments to the EPA expressing support for expedited action to approve new uses of chlormequat-containing pesticide products.

The grower groups said farmers have a small window of time each season in which to apply certain products such as chlormequat, so urgent action is needed if farmers are to reap the advantages this growing season.

In contrast, in its written comments to the EPA, CFS said the risks are not worth the gain.

"The putative benefit of applying chlormequat to grains is far outweighed by the risks and costs to human health and the environment," the group wrote.

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